KUSOVAC, Dusan, dr.; MANDIC, Vladimir, dr.

Case of mole in twin pregnancy. Srpski arh. celok. lek. 82 no.6: 815-819 June 54.

1. Ginekolosko-akusersko odeljenje Gradske bolnice u Zemunu, sef dr. Dusan Kusovac. (Rad je urednistvo primilo 18.V.1953 god.)
(HYDATIFORM MOLE
in twin pregn., surg.)
(PREGNANCY, compl.
hydatiform mole in twin pregn., surg.)

KUSOVAC, Dusan, dr.; GAJTANOVIC, Ratislava, dr.

Leiomyoma ligamenti rotundi intraabdominale. Srpski arh. celok. lek. 82 no.7-8:1003-1005 July-Aug 54.

1. Ginekolosko-akuserko odeljenje Gradske bolnice u Zemunu, sef: dr. Dusan Kusovac.

(LEIOMYOMA
round uterine ligament)
(UTERUS, neoplasms
leiomyoma of round ligament)

KUSOVAC, Dusan, Dr.

Injuries of the uterus and of the intra-abdominal organs in abortion. Srpski arh.celok. 87 no.10:1262-1269 Oct 54.

1. Ginekolosko-askuserske odeljenje Gradske bolnice u Zemunu. Sef: dr Dusan Kusovac.

(ABORTION, INDUCED, complications,
abdom. & uterine inj.)
(ABDOMEN, wounds and injuries,
in abortion)
(UTERUS, wounds and injuries,
in abortion)

KUSOVAC, D.; MARJANOV, D.

Redak slucaj adnesko-peritonealne tuberculose i velikog mioma maternice. Srpski arh.celok.lek. 83 no.1:104-107 Jan '55.

1. Ginekolosko-akusersko odelenje Gradske bolnice u Zemunu.Sef. prim.dr. Dusan Kusovac.
(TUBERCULOSIS, FEMALE GENITAL, compl.
leiomyoma of uterus, surg.(Ser))
(UTERUS, neoplasms
leiomyoma with genito-peritoneal tuberc.,surg.(Ser))
(LEIOMYOMA,
uterus, with genito-peritoneal tuberc.,surg.(Ser))

KUSOVAC, Dusan, dr.; PESIC, B.

Incipient chorionic epithelioma of the uterus after hydatidiform mole. Srpski arh. celok. lek. 85 no.4:480-486 Apr 57.

1. Ginekolosko-akuserska odelenje Gradske bolnice u Zemunu
Sef: prim. dr. dr. Dusan Kusovac.
(CHORIOCARCINOMA, etiol. & pathogen.
incipient of uterus after hydatidiform mole (Ser))
(HYDATIDIFORM MOLE, compl.
incipient choriocarcinoma of uterus (Ser))

KUSOVAC, Dusan; PESIC, Branislav

Extra-uterine pregnancy in the stump of a resected tube. Srpski arh. celok. lek. 87 no.7-8:697-699 Jl-Ag '59.

1. Ginekolosko-akusersko odeljenje Gradske bolnice u Zemunu, sef: prim. dr Dusan Kusovac.
(PREGNANCY ECTOPIC case reports)
(FALLOPIAN TUBES surg.)

YUGOSLAVIA

Dusan [illegible], Primarius and Head (Nacelnik) Department of Obstetrics and Gynecology, City Hospital of Zemun near Belgrade (Ginekolosko-akusersko odeljenje Gradske bolnice) Zemun.

"Our Experiences with Wertheimer Operations Carried out in [illegible]."

Belgrade, Srpski Arhiv za Celokupno Lekarstvo, Vol [illegible], No [illegible], [illegible] pp [illegible].

Abstract [French summary modified]: Review of 174 patients with cancer of neck or body of uterus, all operated by radical abdominal (Wertheim) technique. Data with discussion of need of early diagnosis, exact operative technique, survival outlook. Three tables, [illegible] and 17 Western references.

1/1

KUSOVAC, Dusan; MARJANOV, Dusan

Three cases of Brenner's tumor. Srpski arh. celok. lek. 91 no.7: 727-730 Jl- Ag'63.

1. Ginekolosko-akusersko odeljenje Gradske bolnice u Zemunu. Nacelnik: prim.dr.Dusan Kusovac.

*

[illegible]

[illegible] Department [illegible] Obstetrics and Gynecology (Ginekolosko-
[illegible] Hospital (Bolnica) "Danilo I", Chief (Sef) Dr
[illegible], Cetinje.

[illegible] Torsion of Hydrosalpynx."

[illegible] Achiv za Celokupno Lekarstvo, Vol 90, No 9, Sept 1962;
[illegible]

Abstract [English summary modified]: Case report. Gynecologic exploration
[illegible] differential diagnosis; uneventful recovery
[illegible] 4 Western references.

BRYZGALOV, Valentin Andreyevich, prof.; VERESOV, Konstantin Nikolayevich,
dots.; KUSOVNIKOV, Ye.N., red.; BARANOVA, L.G., tekhn. red.

[Vegetable gardening]Ovoshchevodstvo. Leningrad, Sel'khozizdat,
1962. 343 p. (MIRA 16:2)
(Vegetable gardening)

VASIL'YEV, Mikhail Vasil'yevich; NIKITIN, Aleksandr Grigor'yevich;
KUSOVNIKOV, Ye.N., red.; BARANOVA, L.G., tekhn. red.

[Practices in land improvement on the "Detskosel'skii" State Farm] Opyt melioratsii zemel' v sovkhoze "Detskosel'skii." Leningrad, Sel'khozizdat, 1962. 77 p. (MIRA 16:5)

1. Glavnyy agronom sovkhoza "Detskosel'skiy", Prinevskaya nizmennost' Leningradskaya oblast' (for Vasil'yev). 2. Glavnyy inzhener sovkhoza "Detskosel'skiy", Prinevskaya nizmennost' Leningradskaya oblast' (for Nikitin).
(Reclamation of land)

MAL'TSEV, Aleksandr Ivanovich, akademik; ZAYEV, P.P., prof.;
FEDOSEYEVA, M.P., dots.; KUSOVNIKOV, Ye.N., red.; BARANOVA,
L.G., tekhn. red.

[Weeds of the U.S.S.R. and their control] Sornaia rastitel'nost' SSSR i mery bor'by s nei. Izd.4., perer. i dop. P.P. Zaevym i M.P.Fedoseevoi. Leningrad, Sel'khozizdat, 1962. 268 p.
(MIRA 16:6)

(Weed control)

IMIELINSKI, Jan, mgr inz.; PIRSZTEL, Jerzy, inz.; KUSOWSKI,
Kazimierz

Methods of decreasing the number of possible 15 kv cable faults. Energetyka Pol 18 no. 2: 44-45-48 F '64.

1. Zaklad Energetyczny, Gdansk.

[illegible]

GORNOPOL'SKIY, Abram Isaakovich; KUSPITS, A.A., otvetstvennyy red.; SAVIN, M.M., red.izd-va; PROZOROVSKAYA, V.L., tekhn.red.; SABITOV, A., tekhn.red.

[Electrician in mine construction; sinking of horizontal and sloping workings] Elektroslesar' na stroitel'stve shakht; provedenie gorizontal'nykh i naklonnykh vyrabotok. Moskva, Ugletekhizdat, 1955. 259 p. (MIRA 11:6)
(Mining machinery) (Electricity in mining)

KUSSMANN, A.
MENYHART, J.

Development and present conditions of the district heating of Dresden. p. 217

EPULETGEPESZET (Epitoipari Tudomanyos Egyesulet) Budapest, Hungary
Vol. 5, no. 6, 1959

Monthly list of East European Accession (EEAI) LC Vol
9, no. 2, Feb. 1960

Uncl.

KUSSUL', A.M., inzh.; SKURYGIN, [illegible].K., inzh.; ISAKOV, Yu.A., inzh.

Operation of large current carrying contactors at high temperatures. Elektrotekhnika 35 no.5:54-55 My'64 (MIRA 17:8)

SERENKOV, G.P.; KUST, S.V.

Nucleic acids and remote hybridization of yeast. Dokl. AN SSSR 142 no.5:1197-1200 F '62. (MIRA 15:2)

1. Predstavleno akademikom A.I.Oparinym.

(Nucleic acids)
(Yeast)
(Hybridization, Vegetable)

KUST, V., kand.ekonom.nauk (Leningrad); ZORIN, S., kand.ekonom.nauk (Leningrad);
ZHDANOVA, S., kand.ekonom.nauk (Leningrad)

Textbook on the organization and technology of trade. Sov. torg.
37 no.11:47-48 N '63. (MIRA 16:12)

VIRNIK, D.I., starshiy nauchnyy sotrudnik; KHAR'KOVA, A.G., mladshiy nauchnyy sotrudnik; SHAKHNAZAROVA, M.Sh., mladshiy nauchnyy sotrudnik; VLASOV, A.P., inzh.; ROSTOVTSEVA, V.I., inzh.; CHEKANOVA, G.V., inzh.; Prinimali uchastiye:ARTEMOVA, N.N.; TSYPINA, N.D.; KUST, Ye.F.

Preparation of gelatin from raw materials processed with the acid method. Trudy VNIIMP no.13:52-63 '62. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promyshlennosti (for Khar'kova, Shakhnazorova, Artemova).
2. Moskovskiy zhelatinovyy zavod (for Vlasov, Rostovtseva, Chekanova, TSypina, Kust.).

S/185/62/007/011/015/019
D234/D303

AUTHORS: Mykhaylyuk, I.P., Mykhal'chenko, V.P. and Kusta, G. D.P.

TITLE: Temperature dependence of the intensity of X-ray interference in aluminum and in chromium ferrite

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 11, 1962, 1246-1250

TEXT: If the thermal dilation of the lattice is taken into account, the Debye-Waller factor depends linearly on the auxiliary temperature T_B defined by

$$\frac{\psi(x_T)}{\psi(x_0)} \left(\frac{a_0}{a_T}\right)^{6\gamma-2} = \eta, \quad \eta^T = T_B \tag{8}$$

so that

$$\ln\frac{J_T}{J_0} = -\frac{12h^2\Sigma h_i^2 \psi(x_0)}{mka_0^2\Theta_0^2}(T_B - T_0). \tag{9}$$

Card 1/2

S/185/62/007/011/015/019
D234/D308

Temperature dependence ...

In the experiments the lines (333) and (422) of $CuK\alpha_1$ were used for Al and (552), (532) of $MoK\alpha_1$ radiation for (Fe + 12% Cr). The temperature range was 239-920° K. Above 750°K a deviation of $\ln(J_T/J_0) = f(T_B)$ from linearity is observed in Al, which indicates that there are other factors beside volume expansion affecting M. Fe-Cr satisfies the relation (9), and its characteristic X-ray temperature obtained from the latter is 508 ± 29°K at room temperature. There are 2 figures.

ASSOCIATION: Chernivetskiy derzhuniversytet (Chernovtsy State University)

SUBMITTED: April 14, 1962

Card 2/2

KUTAKH, G.I. (Krasnodar, ul. [illegible], 93, kv.5)

Histochemistry of the main cells of the fundic gastric glands. Arkh.anat., gist. i embr. 46 no.4:75-79 Ap '64. (MIRA 18:5)

1. Kafedra gistologii (zav. - dotsent M.G.Chubich) i kafedra biokhimii (zav. - prof. [illegible]) Kubanskogo meditsinskogo instituta, Krasnodar.

KUZNETSOV, Nikolay Ivanovich; KUSTAKOVICH, M.I., red.; VORONIN, K.P.,
tekhn.red.

[Testing and using electric slip couplings] Ispytaniia i
ekspluatatsiia elektromuft skol'zheniia. Moskva, Gos.energ.
izd-vo, 1959. 99 p. (MIRA 12:2)
(Couplings)

KUSTAL'SKIY, A.A.

Method of calculating devices for removing hydrogen sulfide from water. Ved.i san.tekh.no.9:13-17 S '56. (MLRA 9:10)
(Water--Purification)

KUSTAN, Janos

The work of a socialist brigade of economists. Munka 13 no.12: 16 D'63.

1. Vasas Szakszervezet Czepel Vas - es Femmuvek terulati bizottsaganak tagja.

KUSTANOVICH, D.N.

More consideration to problems in the production of eyeglasses.
Apt. delo 3 no.6:32-33 N-D '54. (MLRA 8:2)
(OPTICS,
in Russia)

AUTHOR: Kustanovich, I.M. 32-11-25/60

TITLE: Spectral Analysis According to the Standard Graduation Diagram by the Method of Complete Vaporization in the Chlorine Atmosphere (Spektral'nyy analiz po yedinomu gradirovochnomu grafiku metodom nezavisimogo ispareniya v atmosfere khlora)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 11, pp. 1332-1335 (USSR)

ABSTRACT: In this paper the attempt was made to bring about a "radical elimination" of the effects of the structural properties of samples on the results of the analysis. The method of vaporization under the reaction of chlorine gas was used. The element to be determined was transformed in the course of vaporization into always equal molecular compounds. The property of certain metals to form chlorides at high temperatures is known, but the task to be performed was the experimental testing of the universal character of this property. Ores, agglomerates, refractories, slags, ferro alloys, cast iron and steel were investigated after the determination of the content of silicon, manganese, and calcium, which differ considerably according to their spectroscopic and other properties. For this purpose a special device was used. On a massive steel base plate 3 brackets with holders for the electrodes are fastened. In

Card 1/3

32-11-25/60

Spectral Analysis According to the Standard Graduation Diagram by the Method of Complete Vaporisation in the Chlorine Atmosphere

the case of a vertical position of the lower holder it is fastened in a manner so as to be insulated against the ground plate, and it has a channel through which chlorine gas is led to the lower electrode. The outer end of this electrode is clamped to the middle holder between the graphite layers. This holder is in direct connection with the base plate. The second (upper) electrode is clamped fast between the parts of the upper holded, which is fastened to and insulated against the base plate. A hermetically tight metal encasement covers all three holders; it has 2 observation holes, one of which is of quarts and the other of glass. The device is fastened in a manner so that it can be moved on the rail of the spectrograph. The sample was fastened to the middle part of the lower electrode between the layers of carbon powder in form of a grained powder. This electrode was heated by a current of 100-180 A (by a transformer of 12 kV). Current control was carried out by a rheostat. The temperatures obtained on this electrode in the domain of up to 2200° were controlled by an optical pyrometer; otherwise, amperage alone was decisive. Temperatures were in the range of 2900°. The generator " ПС -39" was used for the excitation of the spectrum. The process of analysis is described. In the

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32-11-25/60

Spectral Analysis According to the Standard Graduation Diagram by the Method of Complete Vaporization in the Chlorine Atmosphere

course of the experiment it was proved that the possible diffusion of vapor can have practically no influence on the process of analysis. There are 5 figures and 1 table.

ASSOCIATION: Magnitogorsk Industrial Technical Institute (Magnitogorskiy industrial'nyy tekhnikum)

AVAILABLE: Library of Congress

Card 3/3

AUTHOR: Kustanovich, I.M. 32-11-50/60

TITLE: Short Reports (1) (Korotkiye soobshcheniya)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 11, pp. 1393-1393 (USSR)

ABSTRACT: The author tells of his new experiment of "wet photometrisation", which consists in the fact that the film, while being rinsed in water, is covered on its side of exposure by means of a clean glass plate corresponding to its size. When taken out of the water film and glass plate remain firmly together so that they can easily be dried and the experiment of photometrization can easily be carried out. The effect attained by this procedure is that the emulsion of the film does not begin to dry under the action of the rays during photometrization, which, as is known, may be the cause of disadvantageous consequences. In this case the film is uniformly wet under the glass plate, blackening of lines remains constant and distinct during a sufficiently long time. This method was tested and found to be useful in the express laboratory of the Magnitogorsk Metallurgical Combine. The most important result obtained is said to be a considerable saving of time, because the time needed for rinsing can be reduced, and no time is lost in drying the film.

Card 1/2

Short Reports (1) 32-11-50/60

ASSOCIATION: Magnitogorsk Industrial Institute (Magnitogorskiy industrial'nyy tekhnikum)

AVAILABLE: Library of Congress

Card 2/2

[illegible]OVICH, I. [illegible], Cand Chem Sci --([illegible]) "New methods of increasing the speed ~~rate~~ and accuracy of spectral analysis in ferrous [illegible] metallurgy." [illegible], 1 5[illegible]. 10 pp ([illegible] State U im [illegible]), 10[illegible] copies ([illegible], [illegible], 13[illegible])

24(7) PHASE I BOOK EXPLOITATION SOV/1700

L'vov. Universitet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii, 1956.
t. II: Atomnaya spektroskopiya (Materials of the 10th All-Union
Conference on Spectroscopy, 1956. Vol 2: Atomic Spectroscopy)
/L'vov/ Izd-vo L'vovskogo univ., 1958. 568 p. (Series: Its:
Fizicheskiy sbornik, vyp. 4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.);
B.S. Neporent, Doctor of Physical and Mathematical Sciences;
I.L. Fabelinskiy, Doctor of Physical and Mathematical Sciences;
V.A. Fabrikant, Doctor of Physical and Mathematical Sciences; S.M. Rayskiy,
V.G. Koritskiy, Candidate of Technical Sciences; L.K. Klimovskaya,
Candidate of Physical and Technical Sciences; V.S. Miliyanchuk
Candidate of Physical and Mathematical Sciences; A.Ye.
(Deceased), Doctor of Physical and Mathematical Sciences;
Glauberman, Doctor of Physical and Mathematical Sciences;
Ed.: S.L. Gazer; Tech. Ed.: T.V. Saranyuk.

PURPOSE: This book is intended for scientists and researchers in the field of spectroscopy, as well as for technical personnel using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies
of atomic spectrography presented at the 10th All-Union Confer-
ence on Spectroscopy in 1956. The studies were carried out by
members of scientific and technical institutes and include
extensive bibliographies of Soviet and other sources. The
studies cover many phases of spectroscopy: spectra of rare earths,
electromagnetic radiation, physicochemical methods for controlling
uranium production, physics and technology of gas discharge,
optics and spectroscopy, abnormal dispersion in metal vapors,
spectroscopy and the combustion theory, spectrum analysis of ores
and minerals, photographic methods for quantitative spectrum
analysis of metals and alloys, spectral determination of the
hydrogen content of metals by means of isotopes, tables, and
atlases of spectral lines, spark spectrographic analysis,
statistical study of variation in the parameters of calibration
curves, determination of traces of metals, spectrum analysis in
metallurgy, thermochemistry in metallurgy, and principles and
practice of spectrochemical analysis.

Card 2/31

Materials of the 10th All-Union Conference (Cont.) SOV/1700

Kustanovich, I.M. Spectrum Analysis of Different Types of Products by the Calibration Curve 533

Dem'yanchuk, A.S., and Ye.S Kudelya. Special Aspects of the Spectral Determination of Carbon, Phosphorus, and Sulfur in Metal Alloys 535

Shipitsyn, S.A. Effect of Development on the Measurement of Spectral Line Intensities 539

Spektrov, L.A., and V.S. Engel'sht. New Technique in the Use of Additives 543

Nalimov, V.V. Use of Mathematical Statistics in Analytical Work 546

Zhavoronkina, T.K., and O.B. Fal'kova. Use of the Spectral Method for the Determination of Chlorine in Climatological Studies 549

Fishman, I.S. Spectrum Analysis With the Aid of Reference Curves 551

Card 3/31

KUSTANOVICH, I.M.

Spectrograph for the analysis of fused metals and slags.
Fiz.sbor. no.4:451-452 '58. (MIRA 12:5)

1. Magnotogorskiy industrial'nyy tekhnikum.
(Spectrograph)

KUSTANOVICH, I.M.

Simple photoelectric apparatus for the analysis of emission spectra using the summation intensity of many lines. Fiz. sbor. no.4:452-455 '58. (MIRA 12:5)

1. Magnitogorskiy industrial'nyy tekhnikum.
(Spectrum analysis)

KUSTANOVICH, I.M.

Spectrum analysis of variously produced spectra from one calibrating curve. Fiz.sbor. no.4:533-535 '58. (MIRA 12:5)

1. Magnitogorskiy industrial'nyy tekhnikum.
(Spectrum analysis)

KUSTANOVICH I. M.

5(0)

AUTHOR: None Given SOV/32-25-3-61/62

TITLE: New Books (Novyye knigi). Author's Abstracts of Dissertations (Avtoreferaty dissertatsiy)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 3, p 382 (USSR)

ABSTRACT: I. V. Prokof'yeva: Development of Methods for the Separation and Determination of Rhodium and Iridium (Institut obshchey i neorganicheskoy khimii AN SSSR) (Institute of General and Inorganic Chemistry AS USSR)

V. S. Baykov: Development of New Apparatus for the Determination of Gases in Metals and for the Investigation of the Behavior of Hydrogen in the Course of the Electrical Melting Process of Steel (Institut chernoy metallurgii Akademii nauk USSR, Dnepropetrovsk) (Institute of Ferrous Metallurgy of the Academy Sciences, UkrSSR, Dnepropetrovsk)

E. P. Rikman: Local Spectrum Analysis and Its Use in Metallurgy (Tul'skiy mekhanicheskiy institut) (Tula Mechanical Institute)

L. P. Malyavkin: Development and Investigation of the Photoelectrical Plant for Emission Spectrum Analysis (Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR) (Physics Institute imeni P. N. Lebedev of the Academy of Sciences, USSR)

Card 1/2

New Books. Author's Abstracts of Dissertations SOV/32-25-3-61/62

Kustanovich, I. M.: New Methods for Increasing the Velocity and Accuracy of Spectrum Analyses in **Ferrous Metallurgy(Moskovskiy universitet im..M.V.Lomonosova)**(Moscow University imeni M. V. Lomonosov)

Card 2/2

Kustanovich, I.M.

5 (3)

AUTHORS: Topchiyev, A. V., Academician, Geyderikh, SOV/20-128-2-25/59
M. A., Davydov, B. E., Kargin, V. A., Academician, Krentsel',
B. A., Kustanovich, I. M., Polak, L. S.

TITLE: On the Possibility of Producing Polymeric Materials With
Semiconductor Properties From Polyacrylnitrile

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 2, pp 312-315 (USSR)

ABSTRACT: It is difficult to produce organic substances with electronic conductivity since the admitted zones, if they develop at all, are narrow here, whereas the forbidden zones are very wide. This width is so considerable that no electron excitation is caused at temperatures at which the substance concerned is not yet decomposed. The semiconductor properties of the substances described in publications are usually connected with existing condensed aromatic rings and nitrogen atoms (Ref 1). Current carriers are bound to develop comparatively easily in polymers with double bonds, especially with conjugated double bonds, furthermore with atoms in the chain which have electrons on the outer levels that do not take part in the chemical bond (e.g. nitrogen atoms). The electron dispersion in the latter is bound to be low in the case of a sufficiently regular polymer structure. The necessary regularity degree can be approximately estimated from the length of the free path of the electron in the semiconductor, furthermore from the length of the C—C-bonds, the length of the monomeric member, and the length of the electron wave. It was found that one polymeric molecule is sufficient in the main chain of which exists no branching with more than 12 carbon atoms per 35 monomeric members. This holds in the case of a fiber with maximum elongation in which the polymeric molecules are arranged in the direction of the current. Then, no dispersion on the structural irregularities is to be expected. The production of polymers with such a degree of regularity is well possible today. An investigation of the products of thermal transformation of polyacrylnitrile is interesting from the above standpoint. The view of the transformations proceeding here is explained by a scheme. Table 1 gives the results of measurement of the paramagnetic electron resonance of the polymers at room temperature. The method and the device used for this purpose are described in reference 3. From the data given in table 1 it follows that: (1) the semiconductors obtained exhibit good electronic conductivity ($\Delta g<0$). (2) The concentration of current carriers amounts to $10^{18} - 10^{19}$, the degeneration is therefore inconsiderable. (3) The half-width of the spectra of the paramagnetic electron resonance characteristic of the relaxation duration amounts to 10-20 gauss. Figure 1 shows the dependence of electrical conductivity on temperature for polyacrylnitrile which was obtained by a redox initiation and subjected to thermal transformation. The materials produced on the basis of polyacrylnitrile have properties typical of semiconductors, and may be used at increased temperatures (Fig 1). The influence of a γ-radiation on the polymer renders the subsequent thermal treatment still more effective with respect to the production of semiconductors. There are 1 figure, 2 tables, and 5 references, 3 of which are Soviet.

Card 1/3

Card 2/3

SUBMITTED: July 16, 1959

Card 3/3

66493

~~5(4)~~ 5.1190

SOV/20-129-1-40/64

AUTHORS: Kolbanovskiy, Yu. A., Kustanovich, I. M., Polak, L. S., Shcherbakova, A. S.

TITLE: Electron Paramagnetic Resonance Spectra for Some Catalysts of Catalyst - Hydrocarbon Systems and the Action of γ-Rays on Them

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 1, pp 145-148 (USSR)

ABSTRACT: The study of the electron paramagnetic resonance (epr) spectra of catalysts and catalyst - hydrocarbon systems represents a new method of investigating catalysts as well as chemosorptive and catalytic processes. The authors used typical oxide catalysts, such as are applied for cracking, dehydrogenation, hydrogenation, desulfurization, etc. processes (aluminum oxide, aluminum silicate, aluminum oxide-molybdenum oxide, $CoO.Al_2O_3.MoO_3$, $Cr_2O_3.Al_2O_3$ activated by K_2O and molybdenum sulfide). The spectra of the catalysts investigated are discussed (Figs 1-4). The final results are summarized: Independent of irradiation the adsorption of hydrocarbons on Al_2O_3- and aluminum silicate

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66493

SOV/20-129-1-40/64

Electron Paramagnetic Resonance Spectra for Some Catalysts of Catalyst - Hydrocarbon Systems and the Action of γ-Rays on Them

catalysts has but little effect on their epr-spectra. Irradiation produces marked changes in the epr-spectra of aluminum oxide - molybdenum oxide catalysts containing adsorbed hydrocarbons. The temperature dependence of the concentration of centers with unpaired spins indicates the existence of activation barriers. The majority of spectra investigated had no hyperfine structure, the one exception being the aluminum silicate cracking catalyst after adsorption of heptane and heptene and after irradiation. There are 4 figures and 3 Soviet references.

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR (Institute of Petroleum-chemical Synthesis of the Academy of Sciences, USSR)

PRESENTED: June 8, 1959, by A. V. Topchiyev, Academician

SUBMITTED: June 2, 1959

Card 2/2

5.4500(B)
+(3)

SOV/20-129-5-22/64

AUTHORS: Berezkin, V. G., Kustanovich, I. M., Polak, L. S., Topchiyev, A. V., Academician, Chernyak, N. Ya.

TITLE: Low-temperature Radiolysis of Hydrocarbons

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 5, pp 1042 - 1045 (USSR)

ABSTRACT: The authors investigated the influence exerted by low temperatures and by the phase condition on the yield of various products of hydrocarbon radiolysis. The methods of preparation and irradiation were described in reference 1. The composition of the radiolysis products was determined by chromatographic measurement. The concentration of the free radicals was measured by the instrument type EPR. The spectra were taken by the spectrograph type IKS-14 (infrared spectrum) and SF-4 (ultraviolet spectrum). Table 1 supplies data concerning hydrogen and methane yields from heptane, cyclohexane, and isooctane. It may be observed therefrom that the hydrogen yield drops by about 10-15% with heptane- and cyclohexane irradiation in the transition from room temperature to 195°K. A further temperature drop has no noticeable effect

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(in agreement with Ref 3). The dependence of the H_2- and CH_4-yield from isooctane on the temperature is particularly striking. On the transition from room temperature to 195°K the H_2-yield drops somewhat, but rises at 77°K. The amount of CH_4 drops markedly with dropping temperature. Atomic hydrogen effects the formation of H_2-molecules in two ways: $H+H \longrightarrow H_2$ (1), and $H+RH \longrightarrow R^{\cdot}+H_2$ (2), in which connection reaction (2) requires a certain activation energy. Nonetheless, the major part of H_2 is bound to develop with reaction (2) at 300°K due to the great difference in the concentrations of H and RH. Reaction (2) is rendered more difficult at 77°K. This would be expected to cause the yield of the H_2 part, which is formed by way of the radical, to drop by a maximum 50%. In reality, this decrease is 15% only. In the case of isooctane the H_2 yield even increases. Two causes may account for it: 1)Reaction (2) is not entirely suppressed, because the resulting atomic H may be "hot". 2) The lower yield of fragments from the burst of the C-C-bond may partially compensate the resulting H_2-yield. Any increase in the yield of fragment radicals is bound to effect a drop in the molecular hydrogen yield and vice versa. This may be observed particularly well on isooctane. Not only the drop of the H_2-yield is compensated here but furthermore, this yield is increased at 77°K, where the yield of fragment radicals is strongly reduced. Table 2 shows the yields of individual hydrocarbons from C_1 to C_5, which were obtained from heptane by radiolysis at 300, 195, and 77°K. It may be seen therefrom that both the light saturated radiolysis products and the light unsaturated ones decrease somewhat on the transition from room temperature to 195°K. Afterwards, their amount drops to 5/9. Table 3 shows the change in composition and amount of the unsaturated products. At all mentioned temperatures (dosage $\sim 2\text{-}4 \cdot 10^{21}$ ev) trans-olefins, α-olefins and vinylidene structures are formed. The two olefins may be assumed to be brought on the basis of a molecular mechanism, as their formation is independent of temperature. The amount of vinylidene structures rapidly drops with temperature. This may be explained by a secondary character of their formation. Dienes are no doubt radiation-primary reaction products (Ref 4). Their yield is multiplied with temperature drop. Figure 2 shows the dependence of the

Low-temperature Radiolysis of Hydrocarbons

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yield of the heavy residue on the irradiation temperature of heptane. It may be observed from table 4 that the total amount of the heavy residue (compounds $> C_{10}$) drops to almost 2/5 on the transition from 300 to 77°K. To conclude, the authors state that at 300°K the molecular formation way of H_2 is about 50%, and at 77°K it rises to 60% on the expense of the radical way. A verbal communication made by B. A. Smirnov is mentioned in the text. There are 2 figures, 4 tables, and 4 references, 3 of which are Soviet. 4

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR (Institute of Petroleum-chemical Synthesis of the Academy of Sciences, USSR)

SUBMITTED: August 1, 1959

Card 4/4

SOV/4982

International symposium on macromolecular chemistry, Moscow, 1960.

Mezhdunarodnyy simpozium po makromolekulyarnoy khimii SSSR, Moskva, 14-18 iyunya 1960 g.; doklady i avtoreferaty. Sektsiya I. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18, 1960; Papers and Summaries. Section I.) [Moscow, Izd-vo AN SSSR, 1960] 346 p. 5,500 copies printed.

Sponsoring Agency: The International Union of Pure and Applied Chemistry, Commission on Macromolecular Chemistry

Tech. Ed.: T. V. Polyakova.

PURPOSE: This collection of articles is intended for chemists and researchers interested in macromolecular chemistry.

COVERAGE: This is Section I of a multivolume work containing scientific papers on macromolecular chemistry in Moscow. The material includes data on the synthesis and properties of polymers, and on the processes of polymerization, copolymerization, polycondensation, and polyrecombination. Each text is presented in full or summarized in French, English, and Russian. There are 47 papers, 28 of which were presented by Soviet, Rumanian, Hungarian, and Czechoslovakian scientists. No personalities are mentioned. References accompany individual articles.

Tinyakova, Ye. I., B. A. Dolgoplosk, T. G. Zhuravleva, R. N. Kovalevskaya, and T. N. Kuren'gina (USSR). The Synthesis of Cis- and Trans-Diene Polymers on Oxide Catalysts and a Study of Their Structure and Properties 13

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KUZNETSOVA, G.I.

49

KUSTANOVICH, I. M.

PHASE I BOOK EXPLOITATION SOV/4984

International symposium on macromolecular chemistry. Moscow, 1960.

Mezhdunarodnyy simpozium po makromolekulyarnoy khimii SSSR, Moskva, 14-18 iyunya 1960 g.; doklady i avtoreferaty. Sektsiya III. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18, 1960; Papers and Summaries) Section III. [Moscow, Izd-vo AN SSSR, 1960] 469 p. 55,000 copies printed.

Tech. Ed.: P. S. Kashina.

Sponsoring Agency: The International Union of Pure and Applied Chemistry. Commission on Macromolecular Chemistry.

PURPOSE: This book is intended for chemists interested in polymerization reactions and the synthesis of high molecular compounds.

COVERAGE: This is Section III of a multivolume work containing papers on macromolecular chemistry. The articles in general deal with the kinetics of polymerization reactions, the synthesis of special-purpose polymers, e.g., ion exchange resins, semiconductor materials, etc., methods of catalyzing polymerization reactions, properties and chemical interactions of high molecular materials, and the effects of various factors on polymerization and the degradation of high molecular compounds. No personalities are mentioned. References given follow the articles.

Rabek, T. I., and J. Kozmider (Poland). Chlorination of Phenol-Formaldehyde Resins 27

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Wolkóber, Z., T. Kelly, and G. Thurzó (Hungary). The Interaction of Aromatic Amines and Polyvinyl Chloride 79

Geyderikh, M. A., B. E. Davydov, B. A. Krentsel', I. M. Kustanovich, L. S. Polak, A. V. Topchiyev, and R. M. Voytenko (USSR). The Production of Polymeric Materials Which Exhibit Semiconductor Properties 85

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Trostyanskaya, Ye. V., I. P. Losev, A. S. Tevlina, S. B. Makarova, O. P. Nefedova, and Lu Hsien-jao (USSR). Chemical Conversions of Insoluble Copolymers of Styrene 124

Lindeman, J. (Poland). Thermal Stability of Strongly Basic Anion Exchange Resins 140

40

33103
S/638/61/001/000/028/056
B116/B102

54600 1274

AUTHORS: Kolbanovskiy, Yu. A., Kustanovich, I. M., Polak, L. S., Shcherbakova, A. S.

TITLE: Effect of gamma radiation on oxide catalysts and on systems consisting of a catalyst and adsorbed hydrocarbon

SOURCE: Tashkentskaya konferentsiya po mirnomy ispol'zovaniyu atomnoy energii. Tashkent, 1959. Trudy. v. 1. Tashkent, 1961, 191-192

X

TEXT. The authors studied the epr spectra of a series of catalysts before and after irradiation with ~1.25-Mev Co^{60} γ-quanta. They attempted to find out whether carriers of unpaired-electrons exist in the polycrystalline samples. They also studied the interaction between hydrocarbon (and/or the radiolysis product) and the catalyst during adsorption. For this purpose they used aluminum oxide, aluminum silicate cracking catalyst, potassium oxide-promoted chromo-alumina catalyst two molybdeno-alumina catalysts, molybdenum disulfide and cobalto-molybdeno alumina catalysts. None of the catalysts except $Cr_2O_3Al_2O_3$ released a

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Effect of gamm radiation on ...

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signal in the epr spectrum prior to irradiation. The sensitivity of the instrument was approximately 10^{16} unpaired spins in the working volume of the ampoule. After irradiation at 20°C all catalysts with aluminum oxide content released a distinct signal. Its position and with correspond to that of the aluminum oxide signal. A sufficient amount of adsorbed water is probably the reason of the activation of Al_2O_3 catalysts due to irradiation. The adsorption of hydrocarbons (n-heptane, n-heptene-1, cyclohexane and benzene) at 20°C does not change the resonance spectra. At -196°C heptane adsorption on molybdenum sulfide caused two high peaks in the resonance spectrum at both sides of g-2.0033. At -196°C this phenomenon was observed in all hydrocarbons. Irradiation of a system consisting of a catalyst and adsorbed hydrocarbon not only release the aluminum oxide signal but also a more intense signal with $g<2$. This indicates an electronic interaction between the hydrocarbons that had been subject to radiolysis in adsorbed state and the surface of the mentioned catalysts which contained metal oxides of variable valence. There is 1 non-Soviet reference. The reference to the English-language publication reads as follows: J. Phys. Chem., 63, 500, 1959.

X

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR (Institute of Petrochemical Synthesis AS USSR)

Card 2/2

KUSTANOVICH, I. M.,

PHASE I BOOK EXPLOITATION SOV/6177

Akademiya nauk SSSR. Institut neftekhimicheskogo sinteza

Radioliz uglevodorodov; nekotoryye fiziko-khimicheskiye problemy (Radiolysis of Hydrocarbons; Some Physicochemical Problems) Moscow, Izd-vo AN SSSR, 1962. 207 p. Errata slip inserted. 5000 copies printed.

Resp. Eds.: A. V. Topchiyev, Academician, and L. S. Polak, Doctor of Physics and Mathematics; Ed.: L. T. Bugayenko; Tech Ed.: Ch. A. Zentsel'skaya.

PURPOSE: This book is intended for physical and industrial chemists interested in the properties and behavior of irradiated hydrocarbons.

COVERAGE: The book gives a systematic presentation of the results of research on the radiolysis of hydrocarbons carried out from 1957 through 1961 at the Laboratory of Radiation Chemistry, Institut nef'tekhimicheskogo sinteza AN SSSR (Institute of Petro-

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chemical Synthesis, Academy of Sciences USSR). Although the results were obtained for individual compounds, they may be generalized and applied to other members of the same homologous series. The following persons participated in making the experiments and in writing the text: V. G. Beryezkin, V. E. Glushnev, Yu. A. Kolbanovskiy, I. M. Kustanovich, V. D. Popov, A. Ya. Temkin, V. D. Timofeyev, N. Ya. Chernyak, V. A. Shakhray, E. B. Shlikhter, A. S. Shcherbakova, B. M. Negodov, A. Z. Peryshkina, N. M. Rytova, T. A. Tegina, Yu. B. Emin, A. M. Brodskiy, V. V. Voyevodskiy, P. Ya. Glazunov, B. A. Smirnova, and Yu. L. Khait. References, mainly Soviet and English, follow individual chapters.

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AVAILABLE: Library of Congress

SUBJECT: Oil and Gas Industries

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1-18-63

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KUSTANOVICH, Iosif Moiseyevich; PERKOVSKAYA, G.Ye., red.; GOROKHOVA,
S.S., tekhn. red.

[Spectrum analysis]Spektral'nyi analiz. Moskva, Vysshaia shkola,
1962. 399 p. (MIRA 16:2)

(Spectrum analysis)

S/844/62/000/000/012/129
D290/D307

AUTHORS: Vereshchinskiy, I. V., Glazunov, P. Ya., Kustanovich, I. M. and Polak, L. S.

TITLE: Emission spectra of liquids and gases after irradiation with fast electrons

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 85-86

TEXT: Visible and ultraviolet emission spectra of various liquids and gases after irradiation with fast electrons (700 - 800 kev) were studied. Great care was taken to exclude any impurities with known emission spectra in this region and to prevent Cherenkov radiation entering the spectrograph. The dose rate was measured by formate dosimetry and was about 3.9×10^{20} ev/sec. No previously unknown radiations were detected after irradiation of air, nitrogen, methane, propane, or ethylene. Irradiation of _n_-pentane produced a very broad emission band at about 3900 Å extending from

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Emission spectra of ...

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[illegible] to 2400 Å; irradiation of water produced a similar band but at slightly shorter wavelengths. The emission is very weak (the energy yield is less than 1.5×10^{-6} of the energy input in both cases). Further experimental evidence is required before the cause of the emission can be established. There are 2 figures.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR (Institut of Petrochemical Synthesis, AS USSR); Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry, AS USSR)

Card 2/2

S/844/62/000/000/054/129
D204/D307

AUTHORS: Kustanovich, I. M., Polak, L. S. and Rytova, N. M.

TITLE: A study of the luminescence spectra of irradiated hydrocarbons

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 322-325

TEXT: The purpose of this work was to investigate the luminescence spectra obtained during the warming up of some saturated hydrocarbons previously irradiated at low temperatures, to obtain information regarding the source of this emission. In an example, purified n-heptane and cyclohexane were γ irradiated at -196°C, with an integral dose of 15 Mrads. The resulting spectra showed in each case 2 partly overlapping maxima, situated at ~5000 and ~5400 Å for cyclohexane and at ~5100 and ~5500 Å for n-heptane. The emission is ascribed to the recombination of free radicals of various structures, produced during irradiation and stabilized at the then low

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A study of the ...

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D204/D307

temperatures. The presence of such radicals was confirmed by EPR spectroscopy. No emission was observed in the absence of free radicals. Previous irradiation of the specimens with visible light did not affect the luminescent spectra. The quantum yield for irradiated cyclohexane was found to be 1.3 x 10^{-6} photons per radical pair, which agrees with the theoretical value of 10^{-5} - 10^{-6} calculated for the probability of emission during recombination reactions. In the case of cyclohexane, $\sim 10^{-4}$ - 10^{-3} % additions of benzene largely increased the emission intensity, the latter increasing linearly with $\sqrt[3]{c}$ where c is the molar fraction of benzene. There are 2 figures.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR (Institute of Petrochemical Synthesis, AS USSR)

Card 2/2

KUSTANOVICH, I.M.; PATALAKH, I.I.; POLAK, L.S.

Effect of adsorbed gases on the electrophysical properties of pyrolyzed polyacrylonitrile fibers. Kin.i kat. 4 no.1:167 Ja-F '63. (MIRA 16:3)

1. Institut neftekhimichekogo sinteza AN SSSR.
(Acrylonitrile polymers—Electric properties) (Adsorption).

ACCESSION NR: AP4017629 S/0190/64/006/002/0197/0200

AUTHORS: Kustanovich, I. M.; Patalakh, I. I.; Polak, L. S.

TITLE: Semiconducting properties of pyrolized polyacrylonitrile fibers

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 2, 1964, 197-200

TOPIC TAGS: semiconductor, polyacrylonitrile, pyrolized polyacrylonitrile fiber, adsorption, n type conductivity, p type conductivity, p n junction

ABSTRACT: Investigations were made on polyacrylonitrile fabric and individual fibers. The fabric samples were 1 x 0.5 cm and 10 microns thick. They were heat-treated in a current of nitrogen for 120 hours to temperatures of about 650° for A samples and 550° for B samples. The A samples were heated in a vacuum of 10^{-4} mm Hg to 200°. In this range their electrical conductivity increased markedly, but after this it became independent of temperature. B samples were treated repeatedly in a vacuum, and this led to a sequential increase in conductivity and a decrease in activation energy. The experiments show that the effect of adsorption is responsible for the variations in the conductivity as well as for the sign of the thermoelectromotive force. The bulk of pyrolized polyacrylonitrile

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ACCESSION NR:' AP4017629

has n-type conductivity, but the surface layer with adsorbed gases has p-type conductivity. These studies now make it possible to obtain experimentally p-n junctions in polyacrylonitrile. Orig. art. has: 4 figures.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR (Institute of Petrochemical Synthesis AN SSSR)

SUBMITTED: 12Jul62 DATE ACQ: 23Mar64 ENCL: 00

SUB.CODE: PH, CH NO REF SOV: 003 OTHER: 000

Card 2/2

SOV/124-58-1-1236

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 154 (USSR)

AUTHORS: Prigorovskiy, N.I., Preyss, A.K., Daychik, M.L., Bortkevich, V.I., Kustanovich, M.S., Komov, N.N.

TITLE: Full-scale Measurements of the Stresses and Pressures Exerted on Component Parts of the Hydraulic Turbines of the Hydroelectric Power Station on the River Dnepr (Napryazheniya i davleniya na detalyakh gidroturbiny Dneprovskoy GES po dannym naturnykh izmereniy)

PERIODICAL: V sb.: Gidroturbostroyeniye. Nr 4. Moscow-Leningrad, Mashgiz, 1957, pp 103-126

ABSTRACT: Measurements of the actual values of the strains and pressures at a number of points of the runner and of the forces acting on various shaft sections as obtained for the fundamental operational regimes of the turbine.

From the résumé

Card 1/1

KUSTANOVICH, M.S., inzh.; IGNAT'YEVA, T.N.

Tensometric investigation of strain in a model of a Francis runner due to centrifugal forces. [Trudy] LMZ no.4:177-181 '57.
(Strains and stresses) (Hydraulic turbines) (MIRA 11:4)

[illegible]

9(6) PHASE I BOOK EXPLOITATION SOV/2557

Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Leningradskoye oblastnoye pravleniye

Provolochnaya tenzometriya (Theory and Application of Wire Strain Gages) Moscow, Mashgiz, 1959. 138 p. (Series: Leningradskiy dom nauchno-tekhnicheskoy propagandy, kn. 51) 3,500 copies printed.

Sponsoring Agency: Nauchno-tekhnicheskoye obshchestvo priborostroitel'noy promyshlennosti.

Ed.: A.M. Turichin; Ed. of Publishing House: M.A. Chfas; Tech. Ed.: L.V. Shchetinina; Managing Ed. for Literature on the Technology of Machine Building (Leningrad Division, Mashgiz): Ye.P. Naumov.

PURPOSE: This collection of papers is intended for engineers, scientific workers, and technicians making calculations for strength in machinery.

Card 1/5

COVERAGE: This is a third issue of the collection of scientific papers presented at the Leningrad Scientific and Technical Conference on the Theory and Use of Wire Strain Gages, held in May 1958. The papers describe the use of instruments with wire strain gages to investigate different parameters of machine parts and mechanisms during operation. No personalities are mentioned. References follow several of the papers.

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GO/jb
11-19-59

KUSTANOVICH, M.S.

Using strain-measurement techniques in hydraulic turbine construction.
[Izd.] LONITOMASH 51:21-24 '59. (MIRA 12:12)
(Hydraulic turbines) (Strain gauges)

KUSTANOVICH, M.S., inzh.

Investigating stresses in basic parts of hydraulic turbines by the tensometric method. Energomashinostroenie 6 no.4:39-42 Ap '60. (MIRA 13:8)
(Hydraulic turbines)

KUSTANOVICH, Semen Davydovich

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SUDEBNAYA BALLISTIKA (LEGAL BALLISTICS) MOSKVA, GOSYURIZDAT, 1956. 407 p.
ILLUS., DIAGRS., GRAPHS, TABLES. INCLUDES BIBLIOGRAPHY.

KUSTANOVICH, S.D., mayor med. sluzhby, kand. med. nauk

Use of gamma irradiation from thulium ^{170} in medical practice. Voen.-
med zhur no.5:34-36 My '57 (MIRA 12:7)
(ISOTOPES, therapeutic use,
radiothulium (Rus))

KUSTANOVICH, Semen Davydovich; TOMILIN, V.V., red.

[Examination of damage to clothes in medicolegal practice; a practical manual] Issledovanie povrezhdenii odezhdy v sudebnomeditsinskoi praktike; prakticheskoe rukovodstvo. Moskva, Meditsina, [illegible]. [illegible] p.

[illegible]

L 04267-67 EWT(m)/T DJ

ACC NR: AP6013315 (A) SOURCE CODE: UR/0413/66/000/008/0134/0134

AUTHORS: Drong, I. I.; Pritsker, P. Ya.; Kustanovich, S. L.; Vakher, V. I.; Bogdanov, S. A.; Kaloyev, A. V.; Chichikov, G. L.; Stotsenko, V. V.; Vitkevich, V. B.

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B

ORG: none

TITLE: Hydraulic amplifier for a steering mechanism of a machine on wheels. Class 63, No. 180965

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 134

TOPIC TAGS: hydraulic device, hydraulic equipment, hydraulic pressure amplifier, VEHICLE COMPONENT

ABSTRACT: This Author Certificate presents a hydraulic amplifier for a steering mechanism of a machine on wheels. The amplifier is built into the steering mechanism and is connected to the steering shaft. It contains a lead element in the form of a screw, a power cylinder (with its shaft connected to a spline attached to a sector of the steering mechanism), and a distributor. The latter consists of a casing fixed on the gear box of the steering mechanism. The casing contains ducts leading to the working interior of the power cylinder and to its pressure and outflow pipes. A cylindrical valve placed in the casing is located on the steering shaft, while two stops limit the axial displacement of the steering shaft. To provide for the indication of gauge reading of the automatic steering augmented by hand steering, a distributing sleeve (which slides in respect to the cylindrical valve and to the

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ACC NR: AP6013315

casing) is placed in the body of the distributor concentrically with the valve. The sleeve contains openings for passing of liquid and is motivated by plungers placed in the casing and connected to the gauge of automatic steering. These plungers interact with the face surfaces of washers contacting the sleeve. The washers serve as supports limiting the displacement of the sleeve in the casing (see Fig. 1).

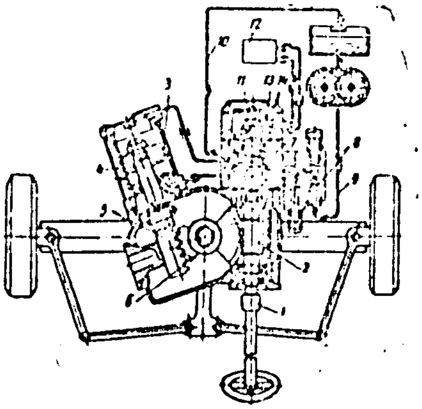

Fig. 1. 1 - steering shaft; 2 - screw; 3 - power cylinder; 4 - shaft of the power cylinder; 5 - spline; 6 - sector of the steering mechanism; 7 - distributor body; 8 - valves; 9 - pressure duct; 10 - overflow duct; 11 - cylindrical valve; 12 - automatic steering gauge; 13 - sliding sleeve; 14 - plungers

The working displacement of the sleeve (limited by the washers) is smaller than the working displacement of the valve. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 14Apr62

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SOV/137-58-9-19393

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 178 (USSR)

AUTHORS: Kustanovich, V.S., Braynin, I.Ye., Bornatskiy, I.I.

TITLE: An Improved Heat-treatment Process for Punches of 6KhV2S Steel (Utochneniye rezhima termicheskoy obrabotki puansonov iz stali 6KhV2S)

PERIODICAL: Sb. nauchn. rabot stud. Donetsk. industr. in-t, 1957, Nr 2, pp 101-104

ABSTRACT: The purpose of the investigation was the increase in the strength of punches of 6KhV2S steel for piercing holes in rail braces by means of establishing optimum temperatures for their quenching and tempering. The critical points were established by means of quenching from 740-1040°C specimens of steel of the composition (in %) of: C 0.57, Mn 0.34, Si 0.66, W 2.51, Cr 1.08, Ni 0.11, S 0.022, and P 0.016. After quenching the hardness, microstructure, and appearance of the fracture were determined. To study the effect of the tempering temperature and of the rate of cooling after tempering relative to a_k and R_C the specimens, after quenching, were tempered at 180-600° keeping a constant temperature for one hour every

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An Improved Heat-treatment Process for Punches of 6KhV2S Steel

40 or 50°. It was established that the optimum conditions of the heat treatment of 6KhV2S-steel punches is quenching from 980° (holding the temperature for 15 min) followed by tempering in a lead bath kept at the temperature of the gold-colored oxide film (250-260°).

A.B.

1. Industrial equipment--Production 2. Steel--Mechanical properties 3. Steel --Processing; 4. Steel--Test results

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KUSTAREV, A. A. Cand Tech Sci -- (diss) "Color calculation of television systems." Mos, 1959. 16 pp (Min of Higher and Secondary Specialized Education RSFSR. Mos Order of Lenin Power Engineering Inst), 250 copies (KL, 49-59, 140)

KUSTAREV, A.I., aspirant

Early harvesting reduces the virus infection of potatoes. Zashch. rast. ot vred. i bol. 6 no.8:56 Ag '61. (MIRA 15:12)

1. Institut kartofel'nogo khozyaystva, Kraskovo, Moskovskoy obl.

(Potatoes—Diseases and pests)
(Virus diseases and plants)

KUSTAREV, A.I.

Effect of early harvesting on the biochemical composition and seed quality of potato tubers. Agrobiologiia no.3:441-442 My-Je '62. (MIRA 15:10)

1. Institut kartofel'nogo khozyaystva, Moskovskaya oblast'.
(SEED POTATOES)

KUSTAREV, A.K.

2

4256. GRAPHICAL CONVERSION OF COORDINATES OF CHROMATICITY. A.K.Kustarev. 535.651

Svetotekhnika, 1956, No. 5, 4-9. In Russian.

Suggests a simplified method of passing from one system of coordinates to another by means of chromaticity diagrams, without using complicated formulae. The method is based on the projective properties of the chromaticity diagram, established by Bingley (Abstr. 4441/1954).

F.Lachman

KUSTAREV, A.K., inzhener.

Graphic conversion of chromaticity coordinates. Svetotekhnika
2 no.5:4-9 S '56. (MLRA 9:11)

(Lighting)

KUSTAREV, A.K.

Color television systems (From "Archiv. d. elektr. Ubertrag." vol.9,1955). Elektrosviaz' 10 no.6:23-32 Je '56. (MLRA 9:8)
(Color television)

KUSTAREV, A. K.

"Courbes de Reponse Spectrale des Dispositifs de Prise De Vues en Television en Couleurs."

paper submitted at Intl. Symposium on Physical Problems of Color Television - Intl Union of (IUPAP) Pure and Applied Physics, Paris, France, 2-6 Jul 57.

KUSTAREV, A.K., inzhener.

Graphic calculation of light coordinates. Svetotekhnika 3 no.4:15-16 Ap'57. (MLRA 10:4)

1. Nauchno-issledovatel'skiy institut Ministerstva svyazi.
(Light--Tables, calculations, etc.)

[illegible] . . ., inzhener.

[illegible] constructing nomograms for calculating [illegible] factors [illegible] ticity. Svetotekhnika [illegible] 22-23 Ag '5[illegible]. (MIRA 10:[illegible])

1. [illegible]-issledovatel'skiy institut Ministerstva svyazi.
(Lighting--Tables, calculations, etc.)

KUSTAREV, A.K.

The state of color television abroad. Elektrosviaz' 11 no.2:20-27 F '57. (MIRA 10:3)

(Color television)

KUSTAREV, A.K., inzh.

Changes in color perception as the visual angle is decreased. (MIRA 11:1)
Svetotekhnika 4 no.1:11-15 Ja '58.

1. Nauchno-issledovatel'skiy institut Ministerstva svyazi.
(Color sense)

KUSTAREV, A.K., inzh.

Light adaptation. Svetotekhnika 4 no.4:4-9 Ap '58. (MIRA 11:4)

1. Nauchno-issledovatel'skiy institut Ministerstva svyazi.
(Eye)

KUSTAREV, A.K.[translator]; VOLKOVA, E.M., red.; SMUROV, B.V., tekhn.red.

[Color television technology; collected articles] Tekhnika tsvetnogo televideniia; sbornik statei. Moskva, Izd-vo "Sovetskoe radio," 1959. 367 p. Translated from the English. (MIRA 12:9)
(Color television)

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SOV/106-59-8-2/12

AUTHORS: Ignat'yev, N.K. and Kustarëv, A.K.

TITLE: Methods of Reducing the Spectrum of a Television Signal

PEPIODICAL: Elektrosvyaz', 1959, Nr 8, pp 14 - 23 (USSR)

ABSTRACT: This is a short review of bandwidth compression methods, as described in the technical literature. The methods are classified on the basis of their action and can be divided into two basic groups:
1) Methods in which the statistical properties of the signal are not considered and in which the frequency band is exchanged - a) for time or b) for signal power.
2) Methods which use the statistical properties of the television image considered as a function of three variables (two space co-ordinates and one time co-ordinate).
The statistical methods can be also divided into two sub-groups: A) without signal "discretization", in which the continuous nature of the signal is maintained by the "free" parts of the spectrum are filled up; B) with discretization, in which only separate discrete values of the signal are transmitted.

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Methods of Reducing the Spectrum of a Television Signal

The classification scheme is shown in Figure 1. Under each sub-group are listed the methods which enter into that particular sub-group. Methods, which for some reason or other, cannot be included in the classification, are placed in the group marked "others". Not all the methods have the same value from scientific or practical points of view. These methods are then considered individually in more detail.

In the frequency-time exchange method, the initial signal is "accumulated" and then transmitted at a lower rate. At the receiver the process is reversed and the initial signal recovered. This method reduces the bandwidth to the same degree as the transmission time is increased but has not found practical application due to undesirable increase in the transmission time, and difficulties in realising the "accumulation".

In a television signal there is, however, some free time, i.e. time intervals occupied by synchronising and suppression pulses, and by using this time, it is possible to reduce the bandwidth approximately 20%.

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Methods of Reducing the Spectrum of a Television Signal SOV/106-59-8-2/12

In the frequency-power exchange method, a large degree of frequency bandwidth compression can theoretically be obtained but to obtain a permissible error in the presence of interference, a large number of power levels are required and the total power is so large that the method has not found practical application.

The statistical methods without discretization, in which the free parts of the spectrum are filled, are classified as statistical, since the law of the distribution of energy in the spectrum is a statistical parameter of the television signal. The television signal spectrum is then considered and a part of it (for progressive scan of a stationary image) is as shown in Figure 2a. When a moving image is transmitted, the discrete components of the spectrum merge into a frequency band.

Two methods for using these free parts are considered:

1) the method of "alternate-line" scanning and
2) the method of "alternate-point" scanning.

Interlacing of the lines and of the points of the raster correspond to particular interlacing of the frequency spectrum.

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Methods of Reducing the Spectrum of a Television Signal SOV/106-59-8-2/12

Finally, uder statistical methods without discretization, are considered interchannel, spectrum-filling methods in which two or more transmitters work on the one and same frequency channel. The general principle underlying the statistical methods of spectrum compression with discretization of the signal is as follows: the continuous information is divided into discrete values which are then transformed into a code. In the discretionization process analysis is made of sections of the message, and from all of its possible discrete combinations only the most probable are transmitted by some code. The code capacity is calculated for transmission of these message combinations only. Signal compression is obtained by reducing the number of discrete message combinations to a minimum. Thus, all the methods of this group are different forms of signal combinations in which the statistical features are taken into account to some degree. The variations considered are:

1) coding of the difference signal;

2) transmission of the coordinates of new values;

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Methods of Reducing the Spectrum of a Television Signal

3) two-speed scanning.

Finally, the author considers other methods -

a) Method of compression of the frame frequencies.

b) Increase in the sharpness of the brightness transitions.

c) A method of alternate transmission of high-frequency components.

d) Quantization with variable step.

There are five figures and 23 references, of which 14 are English and 9 Soviet.

SUBMITTED: April 1, 1959

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KUSTAREV, A.K., kand.tekhn.nauk

Graphical solution of problems in mixing colors. Svetotekhnika 7 no.12:7-1 D '61. (MIRA 14:12)

1. Nauchno-issledovatel'skiy institut Ministerstva svyazi.
(Color)

KUSTAREV, A.K.

Colorimetric properties of a square-law modulated color subcarrier. Elektrosviaz' 17 no.3:31-40 Mr '63. (MIRA 16:4)
(Color television)

KUSTAREV, A.K.

Nonsymmetrical color signal with symmetrical subcarrier. Elektrosviaz' 17 no.10:33-43 0 '63. (MIRA 17:1)

KUSTAREV, G.G., inzhener.

Choice of a die for small-scale production of iron washers. Torf.prom. 31 no.4:22-24 '54. (MLRA 7:6)

1. Demikhovskiy zavod. (Dies (Metal working)) (Washers (Mechanics))

KUSTAREV, G.G., inzh.

Machining of internal cylindrical surfaces with roll mandrels.
Torf. prom. 36 no.5:33 '59. (MIRA 13:1)

1.Demikhovskiy mashinostroitel'nyy zavod.
(Cylinders) (Metal cutting)

DORONINA, V.V., inzh., KUSTAREV, G.G., inzh.

For a wider adoption of technological assemblies by machine-building plants. Torf.prom. 37 no.1:26-27 '60.

(MIRA 13:6)

1. Demikhovskiy mashinostroitel'nyy zavod.

(Machinery industry)